



Mahila Vikas Sanstha's

**INDRAPRASTHA NEW ARTS
COMMERCE & SCIENCE
COLLEGE,** AT POST NALWADI, DIST. WARDHA (M.S.)

Accredited 'B' by NAAC

Approved by government
of Maharashtra

Affiliated to Rashtrasant Tukadoji
Maharaj Nagpur University, Nagpur

Recognised by U.G.C New Delhi
under section 2 (f) & 12 (b) of
UGC act 1956

Class: M.Sc. IV Sem (Computer Science)

Subject: Embedded System

QUESTION BANK

UNIT 1:

1. What are the skills required for an embedded system designer?
2. Explain architecture of PCI.
3. Explain instruction level parallelism in advanced microprocessor.
4. Explain working and functions of watch-dog timer.
5. Explain Parallel Bus communication protocol.
6. Explain the classification of Embedded System. Give the skill required for an Embedded System.
7. Explain the processor in Embedded System. Explain GPP and ASSP.
8. Explain Embedded System-On-Chip (SOC) in VLSI circuit.
9. Explain parallel bus communication protocol.
10. Explain the classification of embedded system. Give the skills repaired for an embedded system designer.
11. Write short note on: Memory Maps and addresses.

UNIT II:

1. Explain modelling of a multiprocessor system.
2. Explain serial and parallel port device drivers in a system.
3. Explain state Machine programming model for Event controlled program flow.
4. Explain the terms;
5. FSM Model
6. Use of Petri Net Model
7. Explain concept of embedded programming using Java.
8. Explain modeling of multiprocessor system.
9. Describe ISR concepts in Embedded System.
10. Explain serial and parallel port device drivers in a system.
11. Explain concept of embedded programming using C++.
12. Explain device driver programming in short.
13. Explain embedded programming using JAVA programming language.
14. Explain interrupt handling mechanism.

UNIT III:

1. Explain RTOS scheduling models.
2. Explain Thread Life Cycle for RTOS.
3. Explain process management in RTOS.
4. Explain memory management of RTOS.
5. Describe multiple processes in an application as process, task, threads and clear cut distinction between functions, ISR's and tasks.
6. Explain use of semaphores for a task and for the critical sections.



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7. Explain Interprocess Communication.
8. Explain Real Time and Embedded System Operating Systems.
9. What are mailbox functions?
10. Explain RTOS Task scheduling models.

UNIT IV:

1. Explain design principle of RT Linux in detail.
2. Explain case study of embedded system design and coding for an Automatic Chocolate Vending Machine (ACVM).
3. Explain RTOS VXWORKS in detail.
4. What are the issues of Hardware/Software design for embedded system? Explain.
5. Explain pipe functions with example.
6. Explain Device Driver Programing.
7. Explain architecture of Windows CE.
8. Differentiate between Real Time and Embedded Operating system.